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10/741,304	12/18/2003	Naveen Kumar Vandanapu	42P17107	4359

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EXAMINER

JEANGLAUDE, JEAN BRUNER

ART UNIT PAPER NUMBER

2819

DATE MAILED: 03/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/741,304

Applicant(s)

VANDANAPU ET AL.

Examiner

Jean B. Jeanglaude

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-7 and 9-20 is/are rejected.
- 7) ☒ Claim(s) 3 and 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 4, 6, 7, 9 – 15, 17 - 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Benno (US Patent Number 6,728,669).

3. Regarding claims 1, 9, Benno discloses an article of manufacture and method (figs. 4 – 10) comprising a machine-accessible medium having content to encode a first and a second subframe of a frame of data, each subframe having multiple tracks; identify one of the multiple tracks for each subframe; and generate a track indicator to indicate the identified track for both subframe. [Fig. 4 in Benno discloses a frame 400 which includes a number of subframes 354, 356, 358. These subframes have a plurality of tracks shown in figs. 5 and 6; the multiple tracks are being identified as well in figs. 5 and 6 as noted as 404, 406, 408, 502, 504; the tracks are being indicated as the track positions 402, 506 in figs. 5, 6 and the identified first and second pulse positions are encoded].

4. Regarding claims 4, 10, Benno discloses an article of manufacture and method (figs. 4 – 10), wherein a track has pulse positions (402, fig. 5; 506, fig. 6) wherein the

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content to provide instructions to cause the device to encode subframes having multiple tracks comprises the content to provide instructions to cause the device to encode subframes having at least one track with an additional pulse position as compared to another track (fig. 10), and wherein the content to provide instructions to cause the device to identify one of the multiple tracks for each subframe comprises the content to provide instructions to cause the device to identify the at least one track with the additional pulse position (fig. 10) [Fig. 4 in Benno discloses a frame 400 which includes a number of subframes 354, 356, 358. These subframes have a plurality of tracks shown in figs. 5 and 6; the multiple tracks are being identified as well in figs. 5 and 6 as noted as 404, 406, 408, 502, 5046; the tracks are being indicated as the track positions 402, 506 in figs. 5, 6 and the identified first and second pulse positions are encoded. Also, as noted in fig. 10, the signals have been splitted / divided into signal frames of which pulse are located in the tracks and encoded identified pulse positions in index of a codebook].

5. Regarding claims 11, Benno discloses an article of manufacture (figs. 4 – 10), wherein the content to provide instructions to cause the device to encode the subframes having multiple tracks comprises the content to provide instructions to cause the device to encode subframes having multiple tracks in a sequence of track locations (910, fig. 10), and wherein the content to provide instructions to cause the device to identify one of the multiple tracks for each subframe comprises the content to provide instructions to cause the device to identify the track location of one of the multiple tracks for each subframe (908, fig. 10), and wherein the content to provide instructions to cause the

device to generate the track indicator (track locations as shown in figs. 5, 6) comprises the content to provide instructions to cause the device to generate a set of bits that corresponds to the track locations for all of the identified tracks for both subframes (figs. 5, 6) [Fig. 4 in Benno discloses a frame 400 which includes a number of subframes 354, 356, 358. These subframes have a plurality of tracks shown in figs. 5 and 6; the multiple tracks are being identified as well in figs. 5 and 6 as noted as 404, 406, 408, 502, 504; the tracks are being indicated as the track positions 402, 506 in figs. 5, 6 and the identified first and second pulse positions are encoded. Also, as noted in fig. 10, the signals have been splitted / divided into signal frames of which pulse are located in the tracks and encoded identified pulse positions in index of a codebook].

6. Regarding claim 13, Benno discloses an encoding apparatus (figs. 4 – 10) comprising: a receiver to receive a data stream [the input data is received at 710 of fig. 8]; processing logic (710, fig. 8) to encode the data stream into a frame of data, the frame of data to have a first and a second subframe, each subframe to have multiple tracks, and the processing logic to identify one of the multiple tracks for each subframe of the received frame of data, and generate a track indicator having information to indicate the identified track for both subframes [Fig. 4 in Benno discloses a frame 400 which includes a number of subframes 354, 356, 358. These subframes have a plurality of tracks shown in figs. 5 and 6; the multiple tracks are being identified as well in figs. 5 and 6 as noted as 404, 406, 408, 502, 504; the tracks are being indicated as the track positions 402, 506 in figs. 5, 6 and the identified first and second pulse positions are encoded]; and a transmitter (602, fig. 7) responsive to the processing logic

to transmit the generated track indicator [Fig. 4 in Benno discloses a frame 400 which includes a number of subframes 354, 356, 358. These subframes have a plurality of tracks shown in figs. 5 and 6; the multiple tracks are being identified as well in figs. 5 and 6 as noted as 404, 406, 408, 502, 5046; the tracks are being indicated as the track positions 402, 506 in figs. 5, 6 and the identified first and second pulse positions are encoded. Also, as noted in fig. 10, the signals have been splitted / divided into signal frames of which pulse are located in the tracks and encoded identified pulse positions in index of a codebook].

7. Regarding claim 14, Benno discloses an encoding apparatus (figs. 4 – 10) wherein the processing logic encodes a frame of data having multiple tracks with pulse positions, and encodes at least one track to have an additional pulse position as compared to another track, and wherein the processing logic identifies the at least one track with the additional pulse position [Fig. 4 in Benno discloses a frame 400 which includes a number of subframes 354, 356, 358. These subframes have a plurality of tracks shown in figs. 5 and 6; the multiple tracks are being identified as well in figs. 5 and 6 as noted as 404, 406, 408, 502, 5046; the tracks are being indicated as the track positions 402, 506 in figs. 5, 6 and the identified first and second pulse positions are encoded. Also, as noted in fig. 10, the signals have been splitted / divided into signal frames of which pulse are located in the tracks and encoded identified pulse positions in index of a codebook].

8. Regarding claim 15, Benno discloses an encoding apparatus (figs. 4 – 10) wherein the processing logic (710, fig. 8) encodes a frame having subframes having

multiple tracks in a sequence of track locations and identifies the track location of one of the multiple tracks for each subframe, and wherein the processing logic generates a set of bits that corresponds the track locations for all of the identified tracks for both subframes. [Fig. 4 in Benno discloses a frame 400 which includes a number of subframes 354, 356, 358. These subframes have a plurality of tracks shown in figs. 5 and 6; the multiple tracks are being identified as well in figs. 5 and 6 as noted as 404, 406, 408, 502, 5046; the tracks are being indicated as the track positions 402, 506 in figs. 5, 6 and the identified first and second pulse positions are encoded. Also, as noted in fig. 10, the signals have been splitted / divided into signal frames of which pulse are located in the tracks and encoded identified pulse positions in index of a codebook].

9. Regarding claim 17, Benno discloses a coding system (figs. 4 – 10) comprising: a speech encoder [vocoder, fig. 7] having: a receiver to receive a data stream [input data is received at 710 of fig. 8]; processing logic (710, fig. 8) to encode the data stream into a frame of data, the frame of data to have a first and a second subframe, each subframe to have multiple tracks, and the processing logic to identify one of the multiple tracks for each subframe of the received frame of data, and generate a track indicator having information to indicate the identified track for both subframes [Fig. 4 in Benno discloses a frame 400 which includes a number of subframes 354, 356, 358. These subframes have a plurality of tracks shown in figs. 5 and 6; the multiple tracks are being identified as well in figs. 5 and 6 as noted as 404, 406, 408, 502, 5046; the tracks are being indicated as the track positions 402, 506 in figs. 5, 6 and the identified first and second pulse positions are encoded. Also, as noted in fig. 10, the signals have

been splitted / divided into signal frames of which pulse are located in the tracks and encoded identified pulse positions in index of a codebook].; and a transmitter (602, fig. 8) responsive to the processing logic to transmit the generated track indicator (fig. 8), and a transmission line (606, fig. 7) coupled with the transmitter to transport the generated track indicator.

10. Regarding claim 18, Benno discloses a coding system (figs. 4 – 10) wherein the processing logic (710, fig. 8) encodes a frame of data having multiple tracks with pulse positions, and encodes at least one track to have an additional pulse position as compared to another track, and wherein the processing logic identities the at least one track with the additional pulse position[Fig. 4 in Benno discloses a frame 400 which includes a number of subframes 354, 356, 358. These subframes have a plurality of tracks shown in figs. 5 and 6; the multiple tracks are being identified as well in figs. 5 and 6 as noted as 404, 406, 408, 502, 5046; the tracks are being indicated as the track positions 402, 506 in figs. 5, 6 and the identified first and second pulse positions are encoded. Also, as noted in fig. 10, the signals have been splitted / divided into signal frames of which pulse are located in the tracks and encoded identified pulse positions in index of a codebook].

11. Regarding claims 6, 19, Benno discloses coding system and method (figs. 4 – 10) wherein the processing logic (710, fig. 8) encodes a frame having subframes having multiple tracks in a sequence of track locations and identifies the track location of one of the multiple tracks for each subframe, and wherein the processing logic generates a set of bits that corresponds the track locations for all of the identified tracks for both



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subframes (figs. 4 – 6; col. 1, lines 33 - 37) [Fig. 4 in Benno discloses a frame 400 which includes a number of subframes 354, 356, 358. These subframes have a plurality of tracks shown in figs. 5 and 6; the multiple tracks are being identified as well in figs. 5 and 6 as noted as 404, 406, 408, 502, 5046; the tracks are being indicated as the track positions 402, 506 in figs. 5, 6 and the identified first and second pulse positions are encoded. Also, as noted in fig. 10, the signals have been splitted / divided into signal frames of which pulse are located in the tracks and encoded identified pulse positions in index of a codebook].

12. Regarding claims 7, 12, 16, 20, Benno discloses a coding system [article of manufacturing] and method (figs. 4 – 10), wherein the processing logic (710, fig. 8) generates a set of bits that corresponds to an ordered pair (col. 1, lines 33 – 38)[as seen vododers generates a number of bits, and figs. 5, 6 as shown have two tracks that have an ordered pair which can be represented as binary numbers], a value of the first member of the pair to indicate the identified track in the first subframe (col. 1, lines 33 – 38), and the value of the second member of the pair to indicate the identified track in the second subframe (col. 1, lines 33 – 38)[as seen vododers generates a number of bits, and figs. 5, 6 as shown have two tracks that have an ordered pair which can be represented as binary numbers and as seen in fig. 5, 6, the second number will identify the track] (figs. 4, 5, 10].

### ***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Benno (US Patent Number 6,728,669) in view of Benyassine et al. (A Silence Compression Scheme For Use With G.729 Optimized for V.70 Digital Simultaneous Voice and Data Applications, IEEE).

15. Regarding claim 5, Benno discloses all the limitations as discussed above except a method wherein the subframes comprises the subframes according to the ITU-T G.729E Standard. However, Benyassine et al., in a related art, discloses a system and method wherein the ITU-T G.729E Standard is used as a coding frames/subframes (page 64, first paragraph)[note that an algorithm was designed to meet the need for an advanced speech coding technology and the speech coding includes frames and subframes]. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Benno's system with that of Benyassine et al. in order to improve performance in the system.

16. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Benno (US Patent Number 6,728,669).

17. Regarding claim 2, Benno discloses all the limitations as discussed above but does not explicitly disclose a method for encoding data wherein encoding the subframes having multiple tracks comprises encoding subframes, each having a number of tracks, the number being other than a power of two and wherein the encoding the subframes having a non-power of two number of tracks comprises encoding subframes having 5

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tracks. However, it is noted in Benno, (406, fig. 5), the number of tracks is a multiple of 4 which includes a number of tracks wherein the number being other than a power of two (for instance 16, 32). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made that Benno's system would perform the same function as the claimed invention since Benno discloses in figs. 5, 6 the structural features that would achieve the same end result.

#### Allowable Subject Matter

18. Claims 3, 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

19. Reasons for allowing these claims will be provided in the next office action.

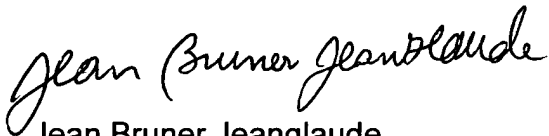
#### Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B. Jeanglaude whose telephone number is 571-272-1804. The examiner can normally be reached on Monday - Friday 7:30 A. M. - 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Tokar can be reached on 571-272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in cursive script that reads "Jean Bruner Jeanglaude".

Jean Bruner Jeanglaude  
Primary Examiner  
March 8, 2005.